# SONA MODERN PUBLIC SCHOOL CLASS – XII HOLIDAY HOMEWORK (2023-24)

# XII - B

# HISTORY

# 1. Prepare a project according to CBSE guidelines.

Some suggested topics are:

$\triangleright$	Town planning and Artefacts of the Harappan civilization	(Roll no -1)		
$\triangleright$	Mahabharata through a Readers eye.	(Roll no - 2)		
$\succ$	Through the eyes of Travelers.	(Roll no - 4)		
$\triangleright$	Understanding the Bhakti-Sufi Movement in India Kabir, Guru N	anak,Mira Bai.		
	(Roll no -5)			
$\triangleright$	How the Partition in 1947 was not just a division of territory but	also a division of hearts and how it affected the		
	common people. (Roll no -6)			
$\succ$		(Roll no -7)		
$\succ$	The Vijayanagar empire with special focus on the city called Han			
$\succ$				
$\succ$				
$\succ$	The Constitution of India- Framing, implementation, importance.			
$\succ$	Revolt of 1857	(Roll no -12)		
$\succ$	Jainism and Buddhism	(Roll no -13)		
$\triangleright$	Rise of Magadha	(Roll no -14)		
$\triangleright$	The mysteries behind the mound of dead – Mohenjo-Daro	(Roll no -15)		
$\succ$	An In-depth study to understand Spiritual Archaeology in the Sub			
	(Roll no -16)			
$\triangleright$	Buddha"s Path to Enlightenment	(Roll no -17)		
$\succ$	Insight and Reflection of Bernier"s notions of The Mughal Empir			
$\triangleright$	An exploratory study to know the women who created history	(Roll no -19)		
$\triangleright$	"Mahatma Gandhi" – A legendary soul	(Roll no -20)		
$\triangleright$	To reconstruct the History of Vijaynagara through the Archaeolog			
	(Roll no			
$\triangleright$	A Hindu Mystic : Mira Bai	(Roll no -22)		
$\triangleright$	Vision of unity behind the first war of Independence	(Roll no -23)		
$\triangleright$	Divine Apostle of Guru Nanak Dev	(Roll no -24)		
$\succ$	Help, Humanity and Sacrifices during Partition	(Roll no -25)		
$\succ$	Glimpses inside Mughals Imperials Household	(Roll no -26)		
$\succ$	The process behind the framing of the Indian Constitution	(Roll no -27)		
$\succ$	The "Brahm Nirupam" of Kabir – A journey to Ultimate Reality	(Roll no -28)		
~				
$\triangleright$	Land Revenue Systems introduced by the Britishers in India	(Roll no -29)		
$\succ$	An insight into the Indian Constitution	(Roll no -30)		
XII - O	2			
Some s	suggested topics are:			
$\succ$	Town planning and Artefacts of the Harappan civilization	(Roll no -1)		
$\succ$	Mahabharata through a Readers eye.	(Roll no - 2)		
$\triangleright$	Through the eyes of Travelers.	(Roll no $-4$ )		
$\succ$	Understanding the Bhakti-Sufi Movement in India Kabir, Guru N	anak, Mira Bai.		
		(Roll no -5)		
$\triangleright$	How the Partition in 1947 was not just a division of territory but	also a division of hearts and how it affected the		
	common people. (Roll no -6)			
$\succ$	Great philosophers of India- Gautam Buddha and Mahavira.	(Roll no -7)		
$\succ$	The Vijayanagar empire with special focus on the city called Han	npi. (Roll no -8)		
$\succ$	The tribal groups of India- The Paharias and the Santhals.	(Roll no -9)		
$\succ$	Role of Mahatma Gandhi in the nationalist movement.	(Roll no -10)		
~	The Constitution of India Examina implementation importance			

> The Constitution of India- Framing, implementation, importance.(Roll no -11)

$\triangleright$	Revolt of 1857	(Roll 1	no -12)
$\succ$	Jainism and Buddhism	(Roll 1	no -13)
$\triangleright$	Rise of Magadha	·	(Roll no -14)
$\triangleright$	The mysteries behind the mound of dead – Mohenjo-Daro	(Roll no -15)	
$\succ$	An In-depth study to understand Spiritual Archaeology in the Sub-Continent		
		(Roll no -16)	
$\succ$	Buddha"s Path to Enlightenment	(Roll 1	no -17)
$\succ$	Insight and Reflection of Bernier"s notions of The Mughal Empir	re (Roll no -18)	
$\succ$	An exploratory study to know the women who created history	(Roll no -19)	
$\succ$	"Mahatma Gandhi" – A legendary soul	(Roll no -20)	
$\succ$	To reconstruct the History of Vijaynagara through the Archaeology of Hampi		
		(Roll no -21)	
$\succ$	A Hindu Mystic : Mira Bai		(Roll no -22)
$\triangleright$	Vision of unity behind the first war of Independence	(Roll no -23)	
$\geqslant$	Land Revenue Systems introduced by the Britishers in India	(Roll no -24)	

# FINAL PRESENTATION/LAYOUT OF THE PROJECT

Section 1:	History Project (Title of the Project)
	Name: School: Year: Roll no.:
Section 2:	Certificate of authenticity (To be pasted)
	Teacher's Signature
Section 3:	Index
Section 4:	Acknowledgement (Acknowledging the institution, the place visited and the person who has helped.)
Section 5:	Preface: Problem Statement/Objective of the project
Section 6:	Introduction: (Objective/learning outcomes of the project. Introduce the selected topic by giving some
	historical background)
Section 7:	Summary of the topic Activities done during the project
Section 8:	Observations and Analysis
Section 9:	Conclusion Summarized suggestions of findings/Future scope of study
Section 10:	Appendix Person consulted, Bibliography, Books, Websites, Films/ Television referred.
Section 11:	Values and Life skills learned through the project
Section 12:	Draft Thank you.

# **General Instructions:**

The project work to be done individually.

- Each student should select one topic.
- Each student to have a separate project file.
- The project should be of minimum 40-50 pages each.
- Use colourful sheets for the work; folder should be handmade and beautifully decorated.
- The project should be totally research and survey based.
- The project must be neat and well-presented and must be completely handwritten.
- The topic must be first approved by the teacher.
- The project should be done on inter leaf A-4 sized sheets.
- Students must preserve the initial draft of the project as well as any research papers that they may have used. (To be attached at the end of the project)

#### 2. Practice Maps of each lesson taught in the class and paste them.

- 3. Go through the sources given in each chapter and make at least 4 questions with answers from each source.
- 4. Collect information and make a creative book for Mauryan and Gupta Empire.

# SUBJECT – ECONOMICS

Part : Project Work based on CBSE.

1. Make a project on the topic assigned according to your roll numbers. The project carries 20 marks according to marking scheme provided by CBSE boards. Topics already shared on Class group as well and explained in the class. (FOR XII A & XII-B & XIIC)

SSI - SMALL SCALE INDUSTRY Roll no -1-5

GST - GOODS & SERVICE TAX Roll no - 6-10 Demonetisation Roll no - 11-15 RWH - RAIN WATER HARVESTING Roll no - 16-20 SHG- SELF HELP GROUP Roll no -21-25 RBI - RESERVE BANK OF INDIA - Role Of RBI in Central Of Credit Roll no - 26-30 SSI- SMALL SCALE INDUSTRY Roll no - 31-35 RWH - RAIN WATER HARVESTING- Roll no -36-41 2. Make 10 MCQ questions from each chapter done in class

3. Do case study questions / source based questions in your copy of each chapter

# SUBJECT – ACCOUNTANCY

(For XII A)

Part : Project Work based on CBSE.

Make a project on the topic assigned according to your roll numbers. The project carries 20 marks according to marking scheme provided by CBSE boards. Topics already shared on Class group as well and explained in the class. Project-1 Comprehensive (Book -3

Project-2 Specific Company assigned to u (Give print out of Data discussed in class)

3. Do scanner questions in new copy (last year 10 year questions)

Book -1- pg S.21- S.23 Q1 to 5

Book -1 pg S.4 Q 1-2

Book -3 Pg S.23- S.27 Q 1 to 12

Book -3 Pg S.1- S. 9 -S.11- Q1 to 28, Q1 to 5 , Q1 to 29 , Q1 to 4 , Q1 to Q17

Book -3 S.28- S. 30 - Q1 to 4

# **ENGLISH CORE**

# **READING AND WRITING**

- 1. Practice Comprehension Passage and Note making passages (any five) from your Bravia's Assignments.
- 2. Write Notices on the following occasions (three of each category)
- a. Tours
- b. Sports
- c. Cultural / Extra- curricular activities
- d. Lost & Found
- e. Appeals
- 3. Draft advertisements on the following topics (three of each category)
- a. Situation Vacant
- b. Situation Wanted
- c. Sale and Purchase
- d. Lost & Found
- e. Matrimonial
- 4. Draft posters to create awareness on the following topics:
- a. Measures and prevention of Covid 19
- b. Prevention of Drug Abuse
- c. Violence Against Women
- d. Fire Safety and prevention
- 5. Write Formal letters on the following topics (three of each category)
- a. Complaint
- b. Editor
- c. Placing order
- d. Enquiry
- e. Job Application
- 6. Write articles on the following topics (Word-limit 150- 200)
- a. My vision of future India
- b. Digital education in India
- c. Women safety in India
- d. 50- years of Earth Day

In Bravia booklet 2 do 3worksheets of notice, advertisement, posters & invitation. And 5 worksheet of letter writing, article, speech, debate & report writing. LITERATURE FLAMINGO Do all worksheet of lessons 1,2&3 Poetry Do worksheet of My Mother at 66& Keeping quiet VISTAS Do all worksheet of lessons 1,2&3 **Project work** The theme of the chapter Lost Spring is about perpetual poverty of certain groups of people and the traditions which make poor children live a life of exploitation. They are stuck in a vicious cycle.

On this Prepare project on children who are poverty stricken taking help from lost spring.

All the work assigned till date should be neatly written in your C.W. notebook and submitted for checking after the holidays.prepare your syllabus for PA 1

### INFORMATICS PRACTICES (PRACTICAL WORK)

### Data Handling using PANDAS (Series and DataFrame)

- 1 Create a pandas series from tuple
- 2 Create a pandas series from list and rename their row indices
- 3 Create a pandas series from dictionary and displaying selected elements at specific indices of the series
- 4 Create a pandas series from ndarray
- 5 Create a pandas Series from list and update the series element at specific index
- 6 Create two pandas series from two ndarrays containing marks of a student in two terms and add elements of both series to find total marks obtained in both the terms
- 7 Create a pandas series from list and display the output of head() & tail() functions on series and also show slicing on series.
- 8 Create a pandas series from ndarray and delete the element from series using del and pop
- 9 Create a pandas data frame from ndarray and display elements of selected columns and rows of a data frame
- 10 Create a pandas DataFrame using dictionary and add column and row into the data frame
- 11 Create a pandas DataFrame using dictionary and delete column and row from the data frame
- 12 Create a pandas DataFrame using dictionary and display output of data frame using head() and tail() function
- 13 Create a pandas DataFrame using list of dictionaries and display elements of data frame using row wise and column wise iteration
- 14 Create a pandas DataFrame using dictionary of lists and create Boolean indexing and display elements of data frame using boolean index
- 15 Create dataframe and writing it into csv file and read the csv file then display data from csv file

#### Theory Questions:-

Solve KV Question No's 1 to 18, 22, 24, 25, 27, 35 PreBoard question paper of Delhi Region & Board Question Paper 2022-23 in your notes copy. Question papers will be provided to you in your IP whatsapp group.

#### CRAFT

# Best out of waste --in this activity you have to use only the waste material.

#Skeleton leaves activity --you have to use the skeleton of the leaves you have to make this activity beautifully..

#Quilling work --to do quilling art you will need a quilling strips, tool and with this you can make beautiful flowers, butterflies and many more things.

#paper flower--use origami paper and you have to make different types of flowers.

# Andaman and Nicobar Island:-

You will have to create a project file related to Andaman and Nicobar island and that specialty will have to be shown through craft work.

1. Painting Composition (draw any two)

# • Imaginative painting based on subject from life and nature in water and poster colours.

#### FINE ART

i) Affairs of family, friends and daily life

ii) Games and sports activities

iii) National, religious, cultural, historical and social events and celebrations.

2. Objects Study

- ArrangeTwo or three objects with drapery (in different colours for background ) water colour(half imperial)
- Draw any five still life (composition) any medium(half imperial)
- 3. Nature study
- Draw any two beautiful landscape (water colour)
- Draw any two nature study object (any medium)
- 4. Draw any one beautiful painting (any medium)
- Madhubani OR Warli Art

### **Business Studies**

Q1. Revise all the chapters done in the class.

Q2. Make a project on the topic assigned according to your roll numbers. The project carries 20 marks according to marking scheme provided by CBSE.

Details of project assigned to students:

- A) Principles of management (Roll no. 1 to 14)
- B) Marketing (Roll no. 15 to 28)
- C) Elements of Business Environment (Roll no. 29 to 41)
- Q3. Practise questions (Do in your B.St copy)

a) "Management is both science as well as art." Explain this statement.

b) "Co-ordination is the process of achieving unity of action among inter- dependent activity and department of an organization". "Explain the nature of co-ordination in the light of this statement.

c) "Management is intangible". Comment.

d) Explain the following principles of management.

- a. Scalar chain.
- b. Esprit De Corps
- c. Division of work
- d. Unity of Direction
- e. Subordination of individual interest to general interest
- f. Equity

e) Explain the contingent nature of Management principles.

f) For the last few years companies in India are looking at organised retailing as a good opportunity. In accordance with this view several companies have planned to enter this environment. The government too is fully supporting this approach. The main reason for the attraction of companies to this approach is the increase in the income of people. Besides, there has taken place a big change in the buying attitude of the people since the last few years. Now people want better quality products, even if they have to pay more money for them. The organised retailing is competent to fulfill this desire of the people.

Identify the three dimensions of the business environment by quoting the lines from the above.

g) The celebration of festivals like Diwali, Id, Christmas, Lohri, Guru Parv etc. provides significant financial opportunities to many businesses like greetings card companies, confectionery or sweets manufacturers, gift manufacturing companies, etc. Name the dimension of the Business Environment highlighted by this statement.h) Why Planning is considered the primary function of management?

# **Physical education**

# **Theory work**

Chapter 1 : Management of sporting event

- a. Learn and write all the question answers of the chapters done till date.
- b. Read the chapter & learn all multiple choice questions.

Chapter 2: Children & Women in Sports

a. Learn and write all the question answers related to the above mentioned chapter.

b. Read the chapter & learn all multiple - choice questions.

Extra Questions to be done :-

a. Write the advantages of leauge fixtures ?

- b. Describe Intramural & extramural tournament ?
- c. Why planning is important in sports event management ?
- d. Draw a knockout fixture of 10 teams ?

e. List down in detail Sports event management committee and it's role ?

# **Practical work**

a. Sai khelo india test

- b. Brockport physical fitness test
- c. Draw a Athletic trek & list down all track and field events

d. Games

**Class XII A :** Roll number : 1 to 5 – Athletics

6 to 10 – Kho-kho 11 to 15 – Basketball 16 to 20 – Volleyball 21 to 25 – Kho-Kho 26 to 30 – Athletics 31 to 35- Volleyball 36 to 41 – Volleyball

Class XII B : Roll number: 1 to 5 – Volleyball 6 to 10 – Basketball 11 to 20 – Kho-Kho 21 to 25 – Athletics 26 to 30 – Basketball

Class XII C Roll number : 1 to 5 – Basketball 6 to 15 – Kho-Kho 16 to 20 – Volleyball 21 to 24 – Basketball

# POLITICAL SCIENCE

XII – B

# Prepare a project according to CBSE guidelines.

# Some suggested topics are:

1. Partition- Theory behind it and its legacy Roll No -12. State Reorganisation Roll No- 2 3. One Party Dominance Roll No - 3 4. India's Foreign Policy Roll No - 4 5. India's relation with its Neighbours Roll No - 5 6. Emergency- Reasons and Consequences Roll No-67. Coalition Politics Study of UPA and NDA Roll No - 7 8. Middle East Crisis after 1991 Roll No - 8 9. Russia and Ukraine war Roll No - 9 10. Post-Soviet Republics Life after Disintegration Roll No - 10 Roll No - 11 11. EU

	D.11 M. 12
12. UN and its agencies	Roll No - 12
<ol> <li>Globalisation – Eco., Pol., and Cultural Impact on Third World</li> <li>Politics of Reservation in India</li> </ol>	Roll No – 13
	Roll No – 14 Roll No – 15
15. Environment- Sustainable development- Need of the hour	
16. China or India – The next Super Power	Roll No – 16
17. Security in the Contemporary World	Roll No – 17
a) Epidemics & Pandemic (Covid-19 Popular Topic)	
b) Terrorism	
c) Threats to Human Security (Global Poverty, etc.)	
d) External threats from Neighboring Countries	
18. Regional Aspiration – Separatist Movement- Kashmir	Roll No – 18
19. Election Commission- its changing role and importance	Roll No – 19
20. Regional Aspiration – Separatist Movement- Kashmir	Roll No $-20$
21.NAM-1961 to present times.	Roll No $-21$
22. CIS-Central Asian Republics	Roll No $-22$
23. Disintegration of USSR with special focus on Gorbachev.	Roll No $-23$
24. Arab Spring	Roll No – 24
25. Cover the negative as well as positive aspects of relationship between India and the following	-
Focus on any one of the following (current updates should be highlighted):	Roll No – 25
a) Relationship between India and Russia	
b) Relationship between India and China	
c) Relationship between India and Pakistan	
d) Relationship between India and Bangladesh	D.11 M. 26
26.ASEAN	Roll No – 26
27.UN Agencies – UNICEF, UNESCO, WHO	Roll No – 27
28. Pandemics: Covid 19- Its global impact (focus on worldwide cooperation and preparedness controversies	Roll No – 28
29. Election 2019- Rise of BJP and Downfall of Congress (1989-2019).	Roll No – 29
30. United Nations with focus in India's candidature in Security Council.	Roll No $-30$
XII – C	
Prepare a project according to CBSE guidelines.	
Some suggested topics are:	
1. Partition- Theory behind it and its legacy	Roll No – 1
2. State Reorganisation	Roll No- 2
3. One Party Dominance	Roll No - 3
4. India's Foreign Policy	Roll No - 4
5. India's relation with its Neighbours	Roll No - 5
6. Emergency- Reasons and Consequences	Roll No – 6
7. Coalition Politics Study of UPA and NDA	Roll No - 7
8. Middle East Crisis after 1991	Roll No - 8
9. Russia and Ukraine war	Roll No - 9
10. Post-Soviet Republics Life after Disintegration	Roll No - 10
11. EU	Roll No - 11
12. UN and its agencies	Roll No - 12
13. Globalisation – Eco., Pol., and Cultural Impact on the developing countries	Roll No $-13$
14. Politics of Reservation in India	Roll No $-14$
15. Environment- Sustainable development- Need of the hour	Roll No $-15$
16. China or India – The next Super Power	Roll No – 16
17. Security in the Contemporary World	Roll No – 17

- a) Epidemics & Pandemic (Covid-19 Popular Topic)
- b) Terrorism
- c) Threats to Human Security (Global Poverty, etc.)
- d) External threats from Neighbouring Countries

18. Regional Aspiration – Separatist Movement- Kashmir	$Roll \ No-18$
19. Election Commission- its changing role and importance	$Roll \ No-19$
20. Regional Aspiration – Separatist Movement- Kashmir	$Roll \ No-20$
21.NAM- 1961 to present times.	Roll No – 21
22. CIS-Central Asian Republics	Roll No $-22$
23. Disintegration of USSR with special focus on Gorbachev.	$Roll\ No-23$
24. United Nations with focus in India's candidature in Security Council.	$Roll\ No-24$

# FINAL PRESENTATION/LAYOUT OF THE PROJECT

Section 1:	Political Science Project (Title of the Project)
	Name: School: Year: Roll no.:
Section 2:	Certificate of authenticity (To be pasted)
	Teacher's Signature
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	historical background)
Section 7:	Summary of the topic Activities done during the project
Section 8:	Observations and Analysis
Section 9:	Conclusion Summarized suggestions of findings/Future scope of study
Section 10:	Appendix Person consulted, Bibliography, Books, Websites, Films/ Television referred.

- Section 11: Values and Life skills learned through the project
- Section 12: Draft Thank you.

# **General Instructions:**

- 1. Project should be individual only
- 2. It should be a handwritten project on a A4 size sheet.
- 3. Project should be summed up in 40 45 pages.
- 4. It should be well researched based on facts and figures and pictorial.
- 5. The project must have a Table of contents, Title/ Cover page, Acknowledgement, Bibliography, Analysis with headings and sub-headings.
- 6. It must include relevant news clippings, facts and figures, pictures.
- 7. You can plan a survey or an interview to supported your research.

# 2. Read and revise the chapters taught in the class.

3. Complete notes and do assignments in the notebook

# MATHEMATICS

# **Q1 DO FOLLOWING ACTIVITY**

Activity no 1. To verify the relation R in L, of all line in a plane, defined by  $R = \{(l,m) : l is perpendicular m \}$  is symmetric but neither reflexive and transitive Activity no 2. To demonstrate a function is one one but not onto Activity no3 : To demonstrate a function is not one one but onto

**Q2. DO ONE PROJECT FILE ON TWO INDIAN MATHEMATICIAN AND THEIR CONTRIBU** 

**Q3. Find product** [123] 
$$\begin{bmatrix} 1 & 0 & 2 \\ 2 & 0 & 1 \\ 0 & 1 & 2 \end{bmatrix} \begin{bmatrix} 2 \\ 4 \\ 6 \end{bmatrix}$$
  
Q4. Prove AB=BA If  $A = \begin{bmatrix} 2 & -3 & -5 \\ -1 & 4 & 5 \\ 1 & -3 & -4 \end{bmatrix} B = \begin{bmatrix} -1 & 3 & 5 \\ 1 & -3 & -5 \\ -1 & 3 & 5 \end{bmatrix}$   
Q5) find m and n such that  $A^2 = mA + nI_2$  where  $A = \begin{bmatrix} 2 & 3 \\ 1 & 2 \end{bmatrix}$   
Q6)  $A = \begin{bmatrix} 2 & 0 & 1 \\ 2 & 1 & 3 \\ 1 & -1 & 0 \end{bmatrix} find X if A^2 - 5A + 4I + x = 0$   
Q7)Solve x matrix equation  
if  $\begin{bmatrix} 2 & 0 & 7 \\ 0 & 1 & 0 \\ 1 & -2 & 1 \end{bmatrix} \begin{bmatrix} -x & 14x & 7x \\ 0 & 1 & 0 \\ x & -4x & -2x \end{bmatrix} = I_3$   
Q8)  $if[121] \begin{bmatrix} 1 & 2 & 0 \\ 2 & 0 & 1 \\ 1 & 0 & 2 \end{bmatrix} \begin{bmatrix} x \\ 9 \end{bmatrix} = 0$   
Q9)  $if[2x 3] \begin{bmatrix} 1 & 2 & 0 \\ -3 & 2 \end{bmatrix} \begin{bmatrix} x \\ 8 \end{bmatrix} = 0$   
Q10)  $f A = \begin{bmatrix} 1 & 0 & 2 \\ 2 & 1 & 2 \\ 2 & 2 & 1 \end{bmatrix}$  Then show that A root of the polynomial  $f(x) = x^3 - 6x^2 + 7x + 2$   
Q11) IF  $A = \begin{bmatrix} 2 & 3 \\ -1 & 2 \end{bmatrix}$  and  $f(x) = x^2 - 4x + 7$  show that  $f(A) = 0$  Use this result find  $A^5$   
Q12  $A = \begin{bmatrix} 3 & -5 \\ -4 & 2 \end{bmatrix}$  then find  $A^2 - 5A - 1$  then e obtain  $A^5$   
Q13) If A is square matrix such that  $A^2 = I$  then find value of  $(A - I)^3 + (A + I)^3$   
Q15) if  $A = \begin{bmatrix} 1 & 1 & 1 \\ 0 & 1 & 1 \\ 0 & 0 & 1 \end{bmatrix}$  prove That  $A^n = \begin{bmatrix} 1 & n & \frac{n(n+1)}{2} \\ 0 & 1 & n \\ 0 & 1 & n \end{bmatrix}$  for all positive integer n.

- Q3
- 16) in legislative election, a political, party hired a public relation firm to promote its candidate in three ways: telephonic, house calls, and letter the cost per contact ( in paise) is, given 40, 100and 50 to each telephonic , houscall and letter respectively. and no. of contacts of each types in city x is given1000,500, 5000and in y 3000, 1000, 10000 respectively. Find the total amount spent by group in two cities x and y
- Q16)A trust fund has ₹30000 that must be invested 2m two different types of bonds. The first bond pays 5% interest per year , and Second bond pays 7% interest per year . Determine how to divide ₹30000 among the two types of bonds. If The trust obtain annual interest of ₹1800 and ₹2000

Q17. 
$$ifA = \begin{bmatrix} 1 & -1 & 0 \\ 2 & 1 & 3 \\ 1 & 2 & 1 \end{bmatrix}$$
 and  $B = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 1 & 3 \\ 3 & 1 & 2 \end{bmatrix}$  find  $A^T$ ,  $B^T$  and verify  
 $(A \pm B)^T = A^T \pm B^T$  and  $(AB)^T = A^T \cdot B^T$   
Q18)  $if A = \begin{bmatrix} \cos \alpha & \sin \alpha \\ -\cos \alpha & \sin \alpha \end{bmatrix}$  then prove  $A^T A = I_2$ 

Q19) Find the x,y,z if the matrix  $A = \begin{bmatrix} 0 & 2y & z \\ x & y & -z \\ x & -y & z \end{bmatrix}$  satisfy  $A^T A = I_3$ 

Q20).Let  $A = \begin{pmatrix} 3 & 2 & 7 \\ 1 & 4 & 3 \\ -2 & 5 & 8 \end{pmatrix}$  Find matrices x and Y such that X+Y=A Where x is symmetric and Y is a Skew symmetric

Q21).If A and B are symmetric 'then show that AB is also symmetric if AB=BA

If A and B are square matrices of order n, then prove following

- **1.** A (adj A) = (adj A) A = |A|I
- **2.** adj (A') = (adj A)'
- **3.**adj (AB) = (adj B) (adj A)
- **4.**  $adj (kA) = k^{n-1} (adj A), k \in R$
- 5.  $adj (A^m) = (adj A)^m$
- 6. adj  $(adj A) = |A|^{n-2} A$ , A is a non-singular matrix.
- 7.  $|adj A| = |A|^{n-1}$ , A is a non-singular matrix.
- 8.  $|adj (adj A)| = |A|^{(n-1)2} A$  is a non-singular matrix.

9. Adjoint of a diagonal matrix is a diagonal matrix.

**10.** If A be non singular matrix of order n then  $|A \cdot adj(A)| = |A|^n$ 

#### <u>HINDI</u>

सोशल मीडिया और हम	Shiv	Sakshi	Aditya	
भारतीय सभ्यता का उदय	Vansh	moksh	Mohit	
जीवन जगत की व्यापक अनुभूति और मार्मि	क प्रसंगों की अचू	क समझ- महाक	वे तुलसीदास	
	Harman	pankaj	manjeet	
बाजारवाद और उपभोक्तावाद- संस्कृति का				
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Shivansh	Manish	Abhishek	Yash
आजादी के 75 वर्षा बाद भारत का स्वरूप	D1 1			
गतान जिथक व भारत के जिनाकार जॉवर			muskan	
महान शिवये य मारत के शिल्पकार - डाक्ट			Aditva	
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	Aman, Amit,	Chirag,	Vaishuanavi	
· ·			Garmit	
	प <sup>,</sup> या 'डिजिटल क	युग और मैं' में से	किसी एक विषय	पर रचनात्मक लेख
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iv :- https://youtu.be/l3Sqdk88gH4	-	Baghbar	1	
v :- <u>https://youtu.be/epKzi21TRN8</u>	<u>3</u>			
vi :- <u>https://youtu.be/OnhZDZXzBz</u>	<u>4</u>	रदी लाइब्रे	रि (लघु फ़िल्म )	
	भारतीय सभ्यता का उदय जीवन जगत की व्यापक अनुभूति और मार्मि बाजारवाद और उपभोक्तावाद- संस्कृति का आजादी के 75 वर्षों बाद भारत का स्वरूप महान शिक्षक व भारत के शिल्पकार - डॉक्ट हाला वादी- कवि हरिवंश राय बच्चन छायावाद के प्रमुख स्तंभ- क. महादेवी वर्मा ख. सुमित्रानंदन पंत ग. सूर्यकांत त्रिपाठी निराला घ. रामधारी सिंह दिनकर जल ही जीवन है । हिंदी कविता में प्रकृति चित्रण वितान पुस्तक के तीनों पाठों से 20-20 बहु वै <b>'परीक्षा-तनाव के कारण व बचने के उपाय</b> <b>लिखिए। ( शब्द-सीमा 120 शब्द )</b> निम्नलिखित में से कोई दो फ़िल्में देखिए i :- <u>https://youtu.be/gZy4vIGf7MY</u> ii :- <u>https://youtu.be/aIG1Sg3-g2g</u> iv :- <u>https://youtu.be/aIG1Sg3-g2g</u> iv :- <u>https://youtu.be/I3Sqdk88gH4</u> v :- <u>https://youtu.be/epKzi21TRN8</u>	भारतीय सभ्यता का उदय       Vansh         जीवन जगत की व्यापक अनुभूति और मार्मिक प्रसंगों की अवू         बाजारवाद और उपभोक्तावाद- संस्कृति का उल्लेख व बचाव         बाजारवाद और उपभोक्तावाद- संस्कृति का उल्लेख व बचाव         Shivansh         आजादी के 75 वर्षों बाद भारत का स्वरूप         Bhavesh         महान शिक्षक व भारत के शिल्पकार - डॉक्टर भीमराव अंबेडव         Dhruv         हाला वादी- कवि हरिवंश राय बच्चन         क. महादेवी वर्मा         क. महादेवी वर्मा         महान शिक्षक क प्रमुख स्तंभ-         क. महादेवी वर्मा         अप्रक्ष         ख. सुमित्रानंदन पंत         ग. सूर्यकांत त्रिपाठी निराला         Bharti         घ. रामधारी सिंह दिनकर         Dev Kumar,         जल ही जीवन है ।         Afsara, Jiya,         वितान पुस्तक के तीनों पाठों से 20-20 बहु वैकल्पिक प्रश्न अप-         • परीक्षा-तनाव के कारण व बचने के उपाय' या 'डिजिटल ज         लिखिए। ( शब्द-सीमा 120 शब्द )         निम्रलिखित में से कोई दो फ़िल्में देखिए और उनसे मिलन         i :- <a href="https://youtu.be/35qdk88gH4&lt;/a">         iv :- <a href="https://youtu.be/35qdk88gH4&lt;/a"></a></a>	भारतीय सभ्यता का उदयVanshmokshजीवन जगत की व्यापक अनुभूति और मार्मिक प्रसंगों की अचूक समझ- महाक Harmanpankajबाजारवाद और उपभोक्तावाद- संस्कृति का उल्लेख व बचावShivanshanoncal के 75 वर्षों बाद भारत का स्वरूपBhaveshBhaveshBhumiमहान शिक्षक व भारत के शिल्पकार - डॉक्टर भीमराव अंबेडकर DhruvDhruvTanishqTanishqहाला वादी- कवि हरिवंश राय बच्चनTanisha basistक. महादेवी वर्माAyushTanishaख. सुमित्रानंदन पंतTanisha sharmaग. सूर्यकांत त्रिपाठी निरालाBhartiAshishघ. रामधारी सिंह दिनकरDev Kumar, Jatinजल ही जीवन है ।Aman , Amit, Chirag,हिंदी कविता में प्रकृति चित्रणAfsara, Jiya, manshi,वितान पुस्तक के तीनों पाठों से 20-20 बहु वैकल्पिक प्रश्न अपनी उत्तर पुस्तिका प <b>'परीक्षा-तनाव के कारण व बचने के उपाय' या 'डिजिटल युग और मैं' में से</b> लिखिए । ( शब्द-सीमा 120 शब्द )Tam kal <b>'नम्रलिखित में से कोई दो फ़िल्में देखिए और उनसे मिलने वाली पाँच प्रमुर</b> i: - <a href="https://youtu.be/GTXMY">https://youtu.be/GTXMY</a> ii :- <a href="https://youtu.be/BISGdk88gH4">https://youtu.be/GTXKijYI9Y0</a> iii :- <a href="https://youtu.be/BISGdk88gH4">https://youtu.be/BISGdk88gH4</a> w :- <a href="https://youtu.be/PKzi21TRN8">https://youtu.be/PKzi21TRN8</a>	भारतीय सभ्यता का उदयVanshmokshMohitजीवन जगत की व्यापक अनुभूति और मार्मिक प्रसंगों की अचूक समझ- महाकवि तुलसीदासHarmanpankajmanjeetबाजारवाद और उपभोक्तावाद- संस्कृति का उल्लेख व बचावShivanshManishAbhishekआजादी के 75 वर्षों बाद भारत का स्वरूपBhaveshBhumimuskanमहान शिक्षक व भारत के शिल्पकार - डॉक्टर भीमराव अंबेडकरDhruvTanishqAdityaहाला वादी- कवि हरिवंश राय बच्चनTanisha basistpriyanksaniyaछायावाद के प्रमुख स्तंभ-AyushTanishaक. महादेवी वर्माAyushTanishaख. सुभित्रानंदन पंतTanisha sharmaAnkit Sharmaग. सूर्यकांत त्रिपाठी निरालाBhartiAshishघ. रामधारी सिंह दिनकरDev Kumar, JatinGarmitजल ही जीवन है ।Aman, Amit, Chirag,Vaishuanaviहिंदी कविता में प्रकृति चित्रणAfsara, Jiya, manshi,Garmitवितान पुस्तक के तीनों पाठों से 20-20 बहु वैकल्पिक प्रश्न अपनी उत्तर पुस्तिका में करें'परीक्षिटत मा 'b करें'परीक्षा-तनाव के कारण व बचने के उपाय' या 'Gिजिटल युग और में' में से किसी एक विषयI am kalamii :-https://youtu.be/gZy4VIGf7MYI am kalamiii :-https://youtu.be/GTSMYI am kalamiii :-https://youtu.be/GSgag2gTaare zameen pariv :-https://youtu.be/AIG1Sg3-g2gTaare zameen pariv :-https://youtu.be/BISG4k88gH4Baghbanv: :-https://youtu.be/BISG4k88gH4Stifla (लुघू फ़िल्म)